AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application:

Duplicative claims 82-87, presented in the response of February 10, 2009, have been removed such that there is now only a single set of claims 82-87.

Listing of Claims:

1.-18. (Canceled).

19. (Previously Presented) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm), wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of copper (Cu), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

20.-60. (Canceled).

61. (Previously Presented) A diffusion barrier as in claim 19, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

62-65. (Canceled).

66. (Previously Presented) A diffusion barrier as in claim 19, wherein the diffusion barrier is a circuit interconnect.

67. (Withdrawn) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm),

wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of scandium (Sc), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

68. (Withdrawn) A diffusion barrier as in claim 67, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

69. (Withdrawn) A diffusion barrier as in claim 67, wherein the diffusion barrier is a circuit interconnect.

70. (Withdrawn) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm), wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of yttrium (Y), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

71. (Withdrawn) A diffusion barrier as in claim 70, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

72. (Withdrawn) A diffusion barrier as in claim 70, wherein the diffusion barrier is a circuit interconnect.

73. (Withdrawn) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm), wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of

stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of lanthanum (La), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

74. (Withdrawn) A diffusion barrier as in claim 73, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

75. (Withdrawn) A diffusion barrier as in claim 73, wherein the diffusion barrier is a circuit interconnect.

76. (Withdrawn) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm), wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of tungsten nitride (WN), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

77. (Withdrawn) A diffusion barrier as in claim 76, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

78. (Withdrawn) A diffusion barrier as in claim 76, wherein the diffusion barrier is a circuit interconnect.

79. (Withdrawn) A diffusion barrier comprising a plurality of stacked amorphous sub-layers, each sub-layer having a thickness of about 0.4 to about 4.5 nanometers (nm), wherein the plurality of stacked amorphous sub-layers are arranged collectively to inhibit diffusion of a chemical species through the diffusion barrier, and where the plurality of stacked amorphous sub-layers are three or more stacked amorphous sub-layers, wherein the stacked amorphous sub-layers are of alternating composition, where an amorphous

sub-layer of tantalum (Ta) alternates with an amorphous sub-layer of tantalum nitride (TaN), wherein the amorphous sub-layers in the diffusion barrier are mutually adhesive.

80. (Withdrawn) A diffusion barrier as in claim 79, where the plurality of sub-layers in the diffusion barrier are between three and ten in number.

81. (Withdrawn) A diffusion barrier as in claim 79, wherein the diffusion barrier is a circuit interconnect.

82. (Previously Presented) A diffusion barrier as in claim 19, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

83. (Withdrawn) A diffusion barrier as in claim 67, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

84. (Withdrawn) A diffusion barrier as in claim 70, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

85. (Withdrawn) A diffusion barrier as in claim 73, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

86. (Withdrawn) A diffusion barrier as in claim 76, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

87. (Withdrawn) A diffusion barrier as in claim 79, wherein each sub-layer has a thickness of about 0.4 to about 1.5 nanometers (nm).

88. (Previously Presented) A diffusion barrier as in claim 19, wherein the diffusion barrier is electrically conductive.

89. (Withdrawn) A diffusion barrier as in claim 67, wherein the diffusion barrier is electrically conductive.

90. (Withdrawn) A diffusion barrier as in claim 70, wherein the diffusion barrier is electrically conductive.

91. (Withdrawn) A diffusion barrier as in claim 73, wherein the diffusion barrier is electrically conductive.

92. (Withdrawn) A diffusion barrier as in claim 76, wherein the diffusion barrier is electrically conductive.

93. (Withdrawn) A diffusion barrier as in claim 79, wherein the diffusion barrier is electrically conductive.